

Abstract

A weld zone of T-piping and its neighborhood are efficiently laser-heated to remove residual stress. For this purpose, the weld zone of a T-piping (50) is irradiated and heated with a laser beam emitted from a laser head (10) to remove residual stress. At this time, a rotating travel cart (3) travels along a ring rail (2) to adjust the position of the laser head (10) in a θ -direction, a vertical slide (4) slides to adjust the position of the laser head (10) in a Z-direction, a radial slide (5) slides to adjust the position of the laser head (10) in an L-direction, an arcuate piece slide (7) slides along an arcuate piece to adjust the α -direction of the laser head (10), a laser head support portion (9) turns to adjust the β -direction of the laser head (10), and oscillation adjusts the position of the laser head (10) in a γ -direction.